

**Notice of Allowability**

Application No.

09/914,192

Examiner

Steven S. Paik

Applicant(s)

INABA ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed December 30, 2004.
2. ☒ The allowed claim(s) is/are 13-32.
3. ☒ The drawings filed on 31 October 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date herewith.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
Steven S. Paik  
Primary Examiner  
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## **DETAILED ACTION**

### ***Response to Amendment***

1. Receipt is acknowledged of the Amendment filed December 30, 2004. The amendment includes amended claims 13-15, 20, 24, 25, and 28 and newly added claims 29-32.

### **EXAMINER'S AMENDMENT**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Carl T. Thomsen (Reg. No. 50,786) on March 28, 2005.

The application has been amended as follows:

#### **IN THE CLAIMS:**

1-12. (Canceled)

13. (Currently Amended) An information carrier medium which comprises:

at least first and second sheet members each having first and second surfaces opposite to each other, said first and second sheet members being laminated together with the first surface of the first sheet member bonded to the first surface of the second sheet member; and

a security indicium formed on at least one of the first surfaces of the respective first and second sheet members, said security indicium comprising a pattern of a plurality of regions with various sizes, each of the regions in said security indicium being made of a first inking material and a second inking material which are disposed separately from each other,

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the first inking material for giving out light in response to a first wavelength of incident light, and the second ~~first~~ inking material for giving out light in response to ~~the a~~ second wavelength of incident light,

the light given out by the first inking material having a first wavelength different from a second wavelength, the light given out by the ~~first~~ second inking material having the ~~first~~ second wavelength and not having the ~~second~~ first wavelength different from the first wavelength,

the light given out by the second inking material not having the first wavelength and having the second wavelength, the first and second sheet members being opaque to visible light and transparent to the lights of the first and second wavelengths.

14. (Previously Amended) The information carrier medium as claimed in claim 13, wherein one of the inking materials is capable of transmitting the light of the first wavelength, and the other of the inking materials is capable of transmitting the light of the second wavelength and absorbing the light of the first wavelength when irradiated by the incident light.

15. (Previously Amended) The information carrier medium as claimed in claim 13, wherein one of the inking materials is capable of emitting light of the first wavelength, and the other of the inking materials is capable of emitting the light of the second wavelength when irradiated by the incident light.

16. (Previously Presented) The information carrier medium as claimed in claim 13, wherein one of the inking materials is capable of scattering the light of the first wavelength, and the other of the inking materials is capable of scattering the light of the second wavelength when irradiated by the incident light.

17. (Previously Presented) The information carrier medium as claimed in claim 13, wherein one of the inking materials is capable of transmitting the light of the first wavelength and absorbing a light of the second wavelength, and the other of the inking materials is capable of emitting the light of the second wavelength when irradiated by the incident light.

18. (Previously Presented) The information carrier medium as claimed in claim 13, wherein the security indicium formed on such one of the first surfaces of the respective first and second sheet members is invisible to naked eyes.

19. (Previously Presented) The information carrier medium as claimed in claim 18, wherein said first and second sheet members are made of an opaque synthetic resin transparent to a light different from visible light.

20. (Previously Amended) The information carrier medium as claimed in claim 13, wherein said first and second sheet members are made of an opaque synthetic resin containing a polyvinyl chloride copolymer as a principal component, and an overlay film is made of a hard polyvinyl chloride.

21. (Previously Presented) The information carrier medium as claimed in claim 13, wherein said security indicium comprises a bar code made of the two inking materials.

22. (Previously Presented) The information carrier medium as claimed in claim 13, wherein said security indicium comprises characters made of the two inking materials.

23. (Previously Presented) The information carrier medium as claimed in claim 13, further comprising an overlay film integrated with an outer surface of said at least first and second sheet members laminated together, the overlay film having a magnetic strip layered on an outer surface thereof.

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24. (Currently Amended) An electro-optical reader for reading an information carrier medium comprising at least first and second sheet members each having first and second surfaces opposite to each other, said first and second sheet members being laminated together with the first surface of the first sheet member bonded to the first surface of the second sheet member; and a security indicium formed on at least one of the first surfaces of the respective first and second sheet members, said security indicium comprising a pattern of a plurality of regions with various sizes, each of the regions in said security indicium being made of a first inking material and a second inking material which are disposed separately from each other,

the first inking material for giving out light in response to a first wavelength of incident light, and the second inking material for giving out light in response to the a second wavelength of incident light,

the light given out by the first inking material having a first wavelength different from a second wavelength,

the light given out by the second inking material not having the first wavelength and having the second wavelength, the first and second sheet members being opaque to visible light and transparent to the lights of the first and second wavelengths, said reader comprising:

a first source for projecting the light of the first wavelength and a second source projecting light of the second wavelength towards the information carrier medium to illuminate a portion of the information carrier medium in register with the security indicium;

a first detector and a second detector for detecting rays of light obtained from that the portion of the information carrier medium;

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a signal processor which receives signals from said detectors and provides an output signal synthesized by compensating a relative distance between the lights of the first wavelength and the second wavelength projected by said first source and said second source;

a storage device which stores a reference signal for the first and second wavelengths in correspondence to the security indicium; and

a comparator connected with the signal processor for comparing the output signal from said signal processor with the reference signal to verify an authenticity of the information carrier medium.

25. (Previously Amended) The electro-optical reader as claimed in claim 24, further comprising a mechanism for guiding the information carrier medium relative to the lights projected by said first and second sources, wherein said detector comprises two photo-detectors for detecting the rays of light of the first and second wavelengths, respectively, and said signal processor comprises a delay circuit for compensating a delay of signals due to a relative distance between the two photo-detectors.

26. (Previously Presented) The electro-optical reader as claimed in claim 24, wherein said detector comprises a charge-coupled device line sensor.

27. (Previously Presented) The electro-optical reader as claimed in claim 24, wherein said detector comprises a charge-coupled device area sensor.

28. (Currently Amended) A method of verifying authenticity of an information carrier medium comprising at least first and second sheet members each having first and second surfaces opposite to each other, said first and second sheet members being laminated together with the first surface of the first sheet member bonded to the first surface of the second sheet

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member; and a security indicium formed on at least one of the first surfaces of the respective first and second sheet members, said security indicium comprising a pattern of a plurality of regions with various sizes. each of the regions in said security indicium being made of a first inking material and a second inking material which are disposed separately from each other,

the first inking material for giving out light in response to a first wavelength of incident light and the second first inking material for giving out light in response to the a second wavelength of incident light,

the light given out by the first inking material having a first wavelength different from a second wavelength, the light given out by the second inking material not having the first wavelength and having the second wavelength, the first and second sheet members being opaque to visible light and transparent to the lights of the first and second wavelengths, said method comprising the steps of:

providing a first source for projecting the incident light of the first wavelength and providing a second source for projecting the incident light of the second wavelength;

projecting incident lights from the first source and the second source towards the information carrier medium to illuminate a portion of the information carrier medium in register with the security indicium;

detecting rays of lights obtained from that portion of the information carrier medium;

synthesizing the detected signals to provide an output signal by compensating relative distance between the lights projected by the first and the second source;

comparing outputs from the photo-detector with a reference signal stored beforehand for the first and second wavelengths in correspondence to the security indicium; and

in the event that the output from the photo-detector matches with the reference signal, determining that the information carrier medium is authentic.

29. (Previously Added) The electro-optical reader as claimed in claim 24, wherein the lights projected from the first source and the second source are substantially parallel to each other.

30. (Previously Added) The method of verifying authenticity of an information carrier medium as claimed in claim 28, further comprising the step of projecting the light rays from the first source and the second source in a direction substantially parallel to each other.

31. (Previously Added) The electro-optical reader as claimed in claim 24, wherein a portion of the light projected from the first source that is reflected by the first inking material is detected by the first detector, and a portion of the light projected from the second source that is reflected by the second inking material is detected by the second detector.

32. (Previously Added) The method of verifying authenticity of an information carrier medium as claimed in claim 28, further comprising the steps of detecting a portion of the light projected from the first source and reflected by the first inking material by a first photo detector, and detecting a portion of the light projected from the second source and reflected by the second inking material by a second photo detector.

***Allowable Subject Matter***

3. Claims 13-32 are allowed.

The following is an examiner's statement of reasons for allowance: the cited prior arts of the record, Soules et al. (US 5,522,623), Yoshihara (US 5,270,526), and Hagstrom et al. (US 6,354,502) taken alone or in combination of other references do not teach, disclose, or fairly



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disclose the claimed information carrier medium and a reader comprising, among other things, a security indicium formed on at least one of the first surfaces of the respective first and second sheet members. The security indicium further comprises a pattern of a plurality of regions with various sizes, each of the regions in the security indicium is made of a first inking material and a second inking material which are disposed separately from each other. The first inking material is for giving out light in response to a first wavelength of incident light, and the second inking material is for giving out light in response to a second wavelength of incident light. The light given out by the first inking material has a first wavelength different from a second wavelength, and the light given out by the second inking material having the second wavelength and not having the first wavelength different from the first wavelength. Furthermore, while Yoshihara discloses a card having blocks of the same size, the claimed invention has regions having two types of ink with different sizes. After further search and thorough examination of the present application and in view of the Applicant's arguments and amendments, claims 13-32 are found to be in condition for allowance over the prior art made of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven S. Paik whose telephone number is 571-272-2404. The examiner can normally be reached on Mon - Fri (5:30am-2:00pm).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 571-272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steven S. Paik  
Primary Examiner  
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ssp